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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/826,562

04/16/2004

Aaron Hobart

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EXAMINER

BODAWALA, DIMPLE N

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

12/03/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/826,562	<b>Applicant(s)</b> HOBART, AARON	
	<b>Examiner</b> DIMPLE N. BODAWALA	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 12 is/are pending in the application.
- 4a) Of the above claim(s) 8-11 and 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

- ❖ Claims 1-7 and 12 are pending.
- ❖ Claims 8-11 and 13-16 are withdrawn.

In view of the amendment filed on 9/4/2008 following rejections are maintained as a reason of record from the previous office action mailed on 6/4/2008.

- ❖ Rejection of claims 1-7 and 12 under 35 USC 103(a) as being unpatentable over Varona (US 5,679,042) in view of Allen (US 6,220,843).
- ❖ Rejection of claims 1-7 and 12 under 35 USC 103(a) as being unpatentable over Varona (US 5,679,042) in view of Barbier et al. (US 6,164,950).
- ❖ Rejection of claims 1-7 and 12 under 35 USC 103(a) as being unpatentable over Varona (US 5,679,042) in view of Barbier et al. (US 6,053,719).

### ***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. **Claims 1-7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varona (U S Patent No. 5,679,042) in view of Allen (U S Patent No. 6,220,843).**

3. Varona ('042) discloses an apparatus (105) which comprises an extruder assembly (114), a motor (118) as a pump for receiving an extruded polymer from the extruder, wherein the pump forces the molten material through the extruder into the delivery pipe (120), a hopper (110) for receiving a polymer chip (112), plurality of spinning pack (122,124,126) receiving the extruded polymer from the pump or extruder assembly, a conveyor belt (116, 128), wherein the belt (128) is located below the plurality of spinning pack and positioned to receive a plurality of filaments (A,B,C) created when the extruded polymer is passed through the plurality of spinning pack (See figure 5, col.6 lines 42-66), and an entangling means such as conventional withdrawn roll or calendar roll for receiving the plurality of polymer filaments from the belts, and involved to emboss or bond the web (100) into a mat or other product with a pattern (See col.7 lines 23-30). It further teaches that the polymer fiber is PET or polyethylene (See col.5 lines 54-56).

4. It further teaches that the die head (122) produces large denier, die head (124) produces medium denier and a die head (126) produces fibers of fine denier, then the resulting gradient will have the fibers in zone A having

largest pore size, zone B having smaller pore size and Zone C having smallest pore size (See col.7 lines 52-60). It further teaches that the die head having apertures of different diameter and positioned as the laterally outermost spinning packs in a row of spinning packs, and aligned with an outer lateral edge of the belt, but fails to teach or suggest that one of the plurality of die head having lesser number of orifices.

5. It further teaches that the orifices of the a spinning pack comprises a bore having a first end to receive the material and a second end that outputs a filaments (See figure 5), the first end having diameter at least about 50% larger than a diameter of the second end (See col.5 lines 56-63).

6. Varona ('042) discloses all claimed structural limitations as discussed above. It further teaches that the apparatus comprises a spinning pack, but fails to teach or suggest a spinning pack having a plate with multiple orifices.

7. Allen ('843) discloses an a melt blowing apparatus which comprises die tips or nozzles as spinning pack having a plate (41,42) with multiple orifices (53) (See col.5 lines 11-16, 19-24,30-34), wherein apparatus comprises a plurality of spinning packs in a raw (See figure 1). Figure 4 shows the cross sectional view of spinning pack or nozzle which contains the pack with plate (41, 42), wherein plate contains multiple orifices for producing desired shape of filaments as shown in figure 3. Figure 3 further teaches different shapes of

the filaments which inherently teaches that the one or more spinning packs of the plurality of spinning packs comprises lesser numbers of orifices (See assembly and operation of the patent). Further more table 1 cites different types of nozzles with different size of orifices and number of orifices per inch, wherein number of orifices per inch indicates that nozzle comprises plate with different orifices (See col.8 lines 1-20, 32-34).

8. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Varona ('042) by providing a spinning pack with a plate wherein plate comprises multiple orifices because such an alignment is involved to achieve a predetermined and varied pattern of the product (See col.8 lines 1-7) as suggested by Allen ('843).

9. **Claims 1-7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varona (U S Patent No. 5,679,042) in view of Barbier et al. (US 6,164,950).**

10. Varona ('042) discloses an apparatus (105) which comprises an extruder assembly (114), a motor (118) as a pump for receiving an extruded polymer from the extruder, wherein the pump forces the molten material through the extruder into the delivery pipe (120), a hopper (110) for receiving a polymer chip (112), plurality of spinning pack (122,124,126) receiving the extruded

polymer from the pump or extruder assembly, a conveyor belt (116, 128), wherein the belt (128) is located below the plurality of spinning pack and positioned to receive a plurality of filaments (A,B,C) created when the extruded polymer is passed through the plurality of spinning pack (See figure 5, col.6 lines 42-66), and an entangling means such as conventional withdrawn roll or calendar roll for receiving the plurality of polymer filaments from the belts, and involved to emboss or bond the web (100) into a mat or other product with a pattern (See col.7 lines 23-30). It further teaches that the polymer fiber is PET or polyethylene (See col.5 lines 54-56).

11. It further teaches that the die head (122) produces large denier, die head (124) produces medium denier and a die head (126) produces fibers of fine denier, then the resulting gradient will have the fibers in zone A having largest pore size, zone B having smaller pore size and Zone C having smallest pore size (See col.7 lines 52-60). It further teaches that the orifices of the a spinning pack comprises a bore having a first end to receive the material and a second end that outputs a filaments (See figure 5), the first end having diameter at least about 50% larger than a diameter of the second end (See col.5 lines 56-63).

12. It further teaches that the die head having apertures of different diameter and positioned as the laterally outermost spinning packs in a row of

spinning packs, and aligned with an outer lateral edge of the belt, but fails to teach or suggest that one of the plurality of die head having lesser number of orifices.

13. Varona ('042) discloses all claimed structural limitations as discussed above. It further teaches that the apparatus comprises a spinning pack, but fails to teach or suggest a spinning pack having a plate with multiple orifices.

14. Barbier et al. ('950) discloses device for producing thermoplastic filaments which comprises rectangular or round spinning nozzle packs for extruding the filaments (See abstract), wherein each spinning pack (1,14) having a plate with multiple orifices (7,8) (See figures 1a-1b and 2a-2d), wherein at least one spinning pack pf the plurality of spinning packs has a lesser number of orifices (16) than one or more of the remaining spinning packs (See figure 4a,5a).

15. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Varona ('042) by providing a spinning pack of Barbier et al. because such an alignment is involved to produce mixtures of matrix filaments and binding filaments, which lead to produce a good adhesive bonding in the finished carpet such that there are no loose fibers.



16. **Claims 1-7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varona (U S Patent No. 5,679,042) in view of Barbier et al. (US 6,053,719).**

17. Varona ('042) discloses an apparatus (105) which comprises an extruder assembly (114), a motor (118) as a pump for receiving an extruded polymer from the extruder, wherein the pump forces the molten material through the extruder into the delivery pipe (120), a hopper (110) for receiving a polymer chip (112), plurality of spinning pack (122,124,126) receiving the extruded polymer from the pump or extruder assembly, a conveyor belt (116, 128), wherein the belt (128) is located below the plurality of spinning pack and positioned to receive a plurality of filaments (A,B,C) created when the extruded polymer is passed through the plurality of spinning pack (See figure 5, col.6 lines 42-66), and an entangling means such as conventional withdrawn roll or calendar roll for receiving the plurality of polymer filaments from the belts, and involved to emboss or bond the web (100) into a mat or other product with a pattern (See col.7 lines 23-30). It further teaches that the polymer fiber is PET or polyethylene (See col.5 lines 54-56).

18. It further teaches that the die head (122) produces large denier, die head (124) produces medium denier and a die head (126) produces fibers of fine denier, then the resulting gradient will have the fibers in zone A having

largest pore size, zone B having smaller pore size and Zone C having smallest pore size (See col.7 lines 52-60). It further teaches that the orifices of the a spinning pack comprises a bore having a first end to receive the material and a second end that outputs a filaments (See figure 5), the first end having diameter at least about 50% larger than a diameter of the second end (See col.5 lines 56-63).

19. It further teaches that the die head having apertures of different diameter and positioned as the laterally outermost spinning packs in a row of spinning packs, and aligned with an outer lateral edge of the belt, but fails to teach or suggest that one of the plurality of die head having lesser number of orifices.

20. Varona ('042) discloses all claimed structural limitations as discussed above. It further teaches that the apparatus comprises a spinning pack, but fails to teach or suggest a spinning pack having a plate with multiple orifices.

21. Barbier et al. ('950) discloses an apparatus for the manufacture of a spun nonwoven fabric which comprises spinning devices or spinneret devices for extruding the filaments (See abstract), wherein each device having a plate such as rectangular spinneret plates (3) or round spinneret disk (4) with multiple orifices (5,6) (See figures 2a-2b, 3a-3d; col.4 lines 44-54), wherein at least one spinning pack (4) of the plurality of spinning packs has a lesser

number of orifices than one or more of the remaining spinning packs (See figure 2a).

22. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Varona ('042) by providing a spinning pack of Barbier et al. because such an alignment is involved to produce monofilament or a bicomponent filaments from the melt, viewed in the direction of motion of the collector belt and arranged with respect to one another to form nonwoven fabric with different cross sectional structure of filaments (See abstract) or intended to constitute an outward-facing surface of the nonwoven fabric (See col.2 lines 27-30).

### ***Response to Arguments***

23. Applicant's arguments filed on 9/4/2008 have been fully considered but they are not persuasive.

24. Applicant argues that there must be some suggestion or motivation either in references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references.

25. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or

motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine the references is found within the reference as discussed above.

26. Applicant argues that the prior art, Allen (US 6,220,843) does not teach or suggest spinning packs at all much less each spinning pack having a plate with multiple orifices, wherein at least one spinning pack of the plurality has a lesser number of orifice than one or more of the remaining spinning packs. Allen teaches that the difference in filament size and shape are a result of variable die length.

27. Applicant's arguments are fully considered but not found persuasive because Allen ('843) discloses die tips or nozzles as spinning pack having a plate (41,42) with multiple orifices (53) (See col.5 lines 11-16, 19-24,30-34). Further more table 1 cites different types of nozzles with different size of orifices and number of orifices per inch, wherein number of orifices per inch indicates that nozzle comprises plate with different orifices (See col.8 lines 1-20, 32-34).

28. In response to applicant's argument that Allen (US 6,220,843) is nonanalogous art, it has been held that a prior art reference must either be in

the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, both references Varona and Allen are involved to draw down the filaments into micro size, wherein term "filaments" is used interchangeably with the term "fibers". In combination rejection, Varona is modified by Allen by providing spinning pack with a plate having multiple orifices.

29. Applicant further argues that Barbier et al. (US 6,164,950) does not teach or suggest reduced-capacity spinning packs or spinning packs with fewer orifices than other as claimed by Applicant. Barbier teaches spatially combining two different spinning masses within one nozzle to double the capacity of that nozzle, not to produce a density gradient. Barbier clearly states that the number of orifices and differences in orifices sizes are sensitive to the difference in the melt point of the two material. Thus, two nozzles with differing orifice configurations are not meant to be used at the same time with one set of materials.

30. Applicant's arguments are fully considered but not found persuasive because Barbier discloses a system which comprises spinning packs (1). It further discloses spinning pack (1) having a plate with different configuration

such as some plate have fewer orifices than other (See figures 2a-2d; and 3a-3c), thus, the secondary art is capable to have at least one of the spinning pack from the plurality of packs with fewer orifices as required or cited in claim. Furthermore, Figure 4a shows two spinning packs with differing orifice configurations. Barbier teaches that the spinning pack is capable to spin two types of polymers with melting temperature that differ by 5C to 50C, and, further examples 1-2 show that the temperatures set for two polymers are closed enough. If the setting temperatures of both section of spinning pack are close enough, so both section of the spinning pack is capable to have similar material or one set of material rather than two set of material. Here, selection of material is depended on the product to be manufactured, thus, the spinning pack with one set of material or two set of material are intended use of spinning pack for manufacturing desired product. Intended use has been continuously held not to be germane to determining the patentability of the apparatus, *In re Finsterwalder*, 168 USPQ 530. The manner or method in which a machine is to be utilized is not germane to the issue of patentability of the machine itself, *In re Casey*, 152 USPQ 235, 238. Purpose to which apparatus is to be put and expression relating apparatus to contents thereof during the intended operation are not significant in determining patentability of an apparatus claim, *Ex parte*

*Thibault, 164 USPQ 666*. A recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations, *Ex parte Masham, 2 USPQ2d 1647*. Therefore, spinning pack of the Barbier is capable to have plate with different orifice and this configuration is capable to use with one set of material rather than two materials. Nowhere in Barbier teaches that the number of orifices and differences in orifices sizes are sensitive to the difference in the melt point of the two materials.

### ***Conclusion***

31. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period

for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIMPLE N. BODAWALA whose telephone number is (571)272-6455. The examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, PHILLIP C. TUCKER can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dimple N Bodawala  
Examiner  
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Examiner, Art Unit 1791

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